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(54) Sanitary napkin

(57) A sanitary napkin has a fluid absorbent matrix (2 in phantom) and a fluid impervious baffle with a garment attachment adhesive 3 disposed in a spaced uniformly distributed configurational pattern which is inset from the napkin periphery and covers between 50 and 90% of the undergarment facing surface of the baffle.

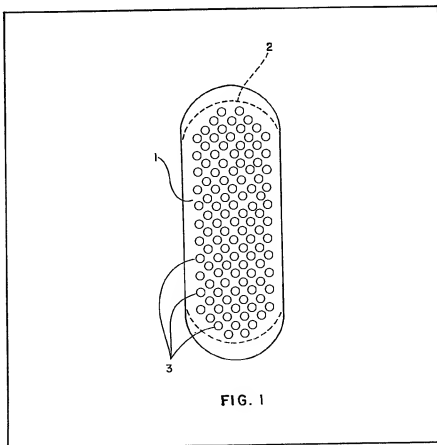


FIG. 1

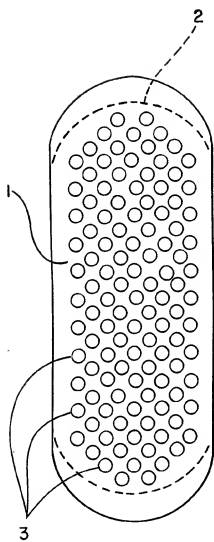


FIG. 1

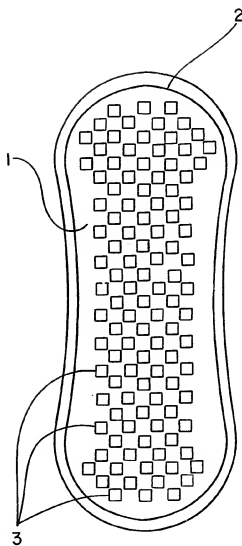


FIG. 2

## SPECIFICATION

## \* Improvements in relation to sanitary napkins

- 5\* This invention relates to sanitary napkins and particularly to a sanitary napkin which is intended to be attached to undergarments by means of a pressure sensitive adhesive.

Sanitary napkins having pressure sensitive adhesive strips on the undergarment-facing side of a fluid impervious baffle have become increasingly popular over the past several years. The concept of attachment by adhesive has not been without its problems in implementation, however. A variety of difficulties have been encountered depending upon the particular geometrical placement of the adhesive on the baffle. Early attempts at adhesive placement produced either wide single bands or narrow double bands of adhesive down the center of the baffle.

Other approaches involve the concept of applying adhesive to flexible tab ends as for example disclosed in U.S. Patent 3,454,008. These ends however have a tendency to fold and adhere to other portions of the baffle or to the wearer. Yet another approach as disclosed in U.S. Patent 4,059,114 contemplated the covering of the entire garment facing side of the baffle with an adhesive layer. The overall coating of the bottom layer of a napkin with adhesive provides the greatest surface area for bonding but when adhesive is present along the peripheral edges, it has a tendency to adhere to the legs of the wearer and may be difficult to remove from the undergarment.

A difficult approach and one which has proved to be the most successful to date is disclosed in U.S. Patent 3,674,595 in which adhesive was used not only to secure the overlaid wrapper portion of the fluid impervious material used as a cover for the sanitary napkin but, due to its placement along the sides of the napkin slightly recessed inward, it obtained good adhesive attachment with minimal amounts of adhesive. While the configuration of U.S. Patent 3,674,595 eliminates these problems, it has been found that in some instances movement of the wearer may disengage the napkin from the undergarment. This problem is particularly acute with certain types of strenuous movements as in vigorous exercise.

A sanitary napkin in accordance with the invention has adhesive disposed on the garment facing side of the fluid impervious baffle in a random pattern. This random pattern is preferably inset at least 1/4" from the outer longitudinal edges of the napkin and terminates at or slightly before the portion of the ends of the baffle corresponding to the absorbent matrix. This all over random pattern covers between about 50 and 90% of the bottom surface area of the baffle and enables increased attachment through periods of strenuous movement without the danger of adherence to the skin of the wearer at the longitudinal edges of the napkin or in the flexible tab ends. The random spaced pattern appears to give resistance to

shear and other forces substantially equal to those obtained from an all over application of adhesive.

- 65 The tab ends are to be considered as the ends of the baffle, or baffle and fluid impervious wrap if one is present, which extend beyond the edge of the absorbent matrix.

The invention will now be further described by way of example with reference to the accompanying drawings in which:

Figures 1 and 2 are bottom plan views of differing embodiments of this invention.

Referring to the drawings Figure 1 illustrates a full size sanitary napkin in which the absorbent material 2 shown in phantom lines terminates somewhat short of the napkin ends. As can be seen, adhesive circles 3 are disposed along the undergarment facing side of the baffle 1 in such a manner that they terminate at or near the edge of the absorbent material 2 but in no instance extend beyond it into the very flexible tab and regions. As can also be seen, the absorbent pattern is recessed slightly along the longitudinal sides of the napkin. The higher the degree of flexibility, the closer the pattern should be to the longitudinal peripheral edges.

A further embodiment of the invention can be seen in Figure 2. In this instance, a sanitary napkin having an absorbent element 2 which is coterminous with the baffle 1 is provided. In this instance, the recess between the adhesive pattern and the ends of the napkin is approximately the same as that of the longitudinal edges. This particular configuration is found for example in the very thin panty shields.

These products generally have increased flexibility when compared to the more bulky standard napkins and, as such, substantial recesses along the entire peripheral edges are generally to be avoided. Of course, if a stiffening member is used or if a stiff baffle is used for a panty liner, then greater recess of the adhesive pattern can be obtained.

It should be noted that there is no particular configuration which has been found to be superior than any of the others with regard to the adhesive pattern. Any sort of either random or reproducible pattern which covers the recessed area with some degree of uniformity is suitable for accomplishing the purposes of this invention.

## CLAIMS

1. A sanitary napkin having a fluid absorbent element and a fluid impervious baffle with a garment attachment adhesive disposed on the garment facing side of said napkin with said adhesive being present in a pattern comprised of a plurality of discrete elements covering between 50 and 90% of the garment facing side of said baffle of said napkin.

2. A sanitary napkin as claimed in Claim 1 wherein a tab without absorbent material is present on each end and there is no adhesive material present in the tab areas.

3. A sanitary napkin as claimed in Claim 1 or 2 in which the pattern is recessed at least 1/4" from the longitudinal edges of the baffle.

4. A sanitary napkin as claimed in any of the pre-

ceding claims wherein the adhesive pattern is recessed at least 1/4" from the uniformly around, the periphery of the baffle and the absorbent component is substantially coterminous with the baffle at all of its edges.

- 5 5. A sanitary napkin substantially as hereinbefore described with reference to either Figure 1 or Figure 2 of the accompanying drawing.

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